CASE REPORT

Unusual foreign body in the upper cervical oesophagus: case report

Insolito corpo estraneo a livello crico-esofageo: caso clinico

S. PELUCCHI, C. BIANCHINI, A. CIORBA[1], A. PASTORE
Department of Medical and Surgical Specialities, Otorhinolaryngology Unit; [1] Department of Medical and Surgical Specialities, Audiological Unit, University of Ferrara, Ferrara, Italy

SUMMARY

The vast majority of oesophageal foreign bodies pass through the gastrointestinal tract without causing complications: only in a few cases is endoscopic or surgical treatment required. A very unusual oesophageal foreign body is described herein, namely a clam shell, treated in a multidisciplinary setting and successfully removed using rigid endoscopy. The peculiarity of this case concerns the shape and location of the foreign body, the age of the patient and the absence of specific adult risk factors.

KEY WORDS: Oesophagus • Foreign body • Dysphagia • Oesophagoscopy

RIASSUNTO

La maggior parte dei corpi estranei ingeriti accidentalmente transita attraverso le vie aerodigestive senza indurre serie complicanze: solo in una piccola percentuale di casi è necessario ricorrere a un trattamento endoscopico e/o chirurgico. Il presente caso clinico descrive un insolito corpo estraneo esofageo, una valva di vongola, per la rimozione del quale è stato necessario ricorrere a endoscopia esofagea rigida. Le peculiarità del caso descritto risiedono inoltre nella localizzazione, nell'età e nell'assenza di specifici fattori di rischio del soggetto.

PAROLE CHIAVE: *Esofago • Corpo estraneo • Disfagia • Esofagoscopia*

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Introduction

Foreign bodies (FBs) in the oesophagus are considered to be a serious clinical condition, both in adults and children, due to the possible complications (oesophageal perforation, mediastinitis, fistulization, airway obstruction) with a high mortality and morbidity [1 2]. Therefore, a rapid and accurate diagnosis, together with subsequent treatment are necessary: in 20% of cases, endoscopic or surgical removal, is promptly required [2 3].

Case report

A 40-year-old female was referred to the Emergency Department of the Ferrara University Hospital, in August 2005, complaining of dysphagia and odynophagia which had begun several hours earlier, after a fish meal.

Antero-posterior (Fig. 1) and lateral (Fig. 2) chest X-rays revealed the presence of a radio-opaque ingested foreign body (4.5 x 1.5 cm) located in the upper cervical oesophagus. An immediate gastroenterological evaluation, performed with flexible endoscopy under sedation, confirmed a bone-like FB just below the superior oesophageal sphincter; unfortunately, the removal manoeuvres failed, due to the shape and the dimensions of this particular FB.

The patient was then referred to the ENT outpatient clinic; the clinical examination was normal. A rigid oesophagoscopy ap-

Fig. 1. Postero-anterior chest X-ray showing radio-opaque foreign body (4.5 x 1.5 cm) at level of upper cervical oesophagus.

Fig. 2. Lateral chest X-ray.

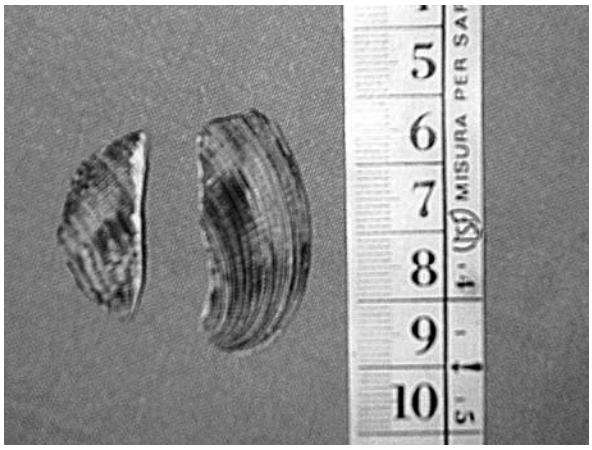

Fig. 3. Foreign body extracted.

proach, under general anaesthesia, was performed. During the examination, using an oval 30 cm Storz/Jesberg (Tuttlingen, Germany) non-pneumatic oesophagoscope (12 x 16 mm diameter) the FB was found, split into two separate parts (possibly due to the previous endoscopic manoeuvres). Using Magill (Adults 11) forceps withdrawn together with the oesophagoscope, the foreign body was successfully removed and identified as a clam shell (Fig. 3).
The patient was discharged after 3 days of intravenous antibiotic treatment and a control flexible oesophagogastroscopy (resulted normal).

Discussion

The vast majority of foreign bodies pass through the gastrointestinal tract uneventfully and no medical/surgical treatment is necessary. Endoscopic treatment or surgical intervention are necessary in 20% and 1% of cases, respectively [1 3-5].
Swallowing of FBs occurs more commonly in children, especially between the age of 6 months and 3 years, and in specific adult risk groups, such as prisoners, alcoholics, edentulous adults and psychiatric patients [1 6 7]. Structural or functional abnormalities of the oesophagus represent the major risk factors [8]. Our patient did not belong to any of these risk categories.
The most common types of ingested objects in the oesophagus are food-related foreign bodies, such as bones, meat bolus, nuts and seeds, or coins, pins and toys [6]. The accidental ingestion of artificial dentures is most common in the elderly [1].
Clinically, oesophageal foreign body (OFB) ingestion may cause dysphagia, odynophagia, diffuse chest pain, sensation of chest pressure, laryngeal irritation. Respiratory signs, such as violent coughing, gagging or incomplete airways obstruction may also be present in cases of FB aspiration [8 9].
It is important to bear in mind that in children, the history may be vague and the initial symptoms poor [1]. Late clinical presentation often includes signs of perforation or infection.
The foreign body usually lies close to one of the 3 oesophageal anatomical constrictions: the cricopharyngeal ring, the aortic arch narrowing or the oesophago-gastric junction [8 10]. It is also interesting to note that the FB position in the oesophagus differs with age, the lower third being the most common in adults [1].
The FB, in our patient, was located in the upper cervical oesophagus, the site usually presenting the greatest difficulties as far as concerns flexible endoscopic treatment [3]; it is important to remember that management of OFB requires a multidisciplinary approach (gastroenterologist, radiologist, ENT specialist or even a thoracic surgeon).
FB in the oesophagus can cause mucosal inflammation, ulceration and perforations and, consequently, severe infections such as mediastinitis, deep neck abscess aspiration, pleural empyema may occur. Other complications reported are scarring, obstruction and fistulization [5 6 10].
To confirm the diagnosis of FB of the upper digestive tract, radiological assessment is necessary. Plain films (neck and chest X-rays) are a very important diagnostic tool, especially in defining the location of the FB [5]. A barium-swallow X-ray study could be useful in cases of non-radio-opaque FB, but due to possible barium aspiration and\or irritation of the damaged oesophageal mucosa, this procedure is no longer used [1-3]. CT scans can be used to confirm the presence and to study the location of FB (especially in the case of fish bones), or to evaluate any eventual damage to the neighbouring structures [2 3].
In our case, chest X-rays already confirmed the presence and the localization of the FB, and, therefore, no other radiological procedure was necessary.
The treatment of choice for OFB depends on various parameters such as patient's age, his/her clinical condition, the type, size, shape, site and also number of FBs [4 5]. In fact, endoscopy is the preferred method for OFB extraction with a reported success rate of 83% [4]. Today, both rigid or flexible endoscopy, performed under general anaesthesia or conscious sedation, respectively, are considered to be safe

and represent effective methods, in experienced hands. For the management of sharp and penetrating FB, rigid endoscopy is often the treatment of choice. Major risks during oesophagoscopical manoeuvres include direct instrumental wounds and perforations [10].

In our case, flexible endoscopy was unsuccessful in the removal manoeuvres mainly due to the size and shape of the FB; only the rigid oesophagoscopy approach was successful.

A laparoscopic approach is mandatory only in those cases in which an endoscopic approach has failed [4 6].

Alternative therapeutic protocols have been proposed in selected cases, such as extraction under fluoroscopic control using a Foley catheter balloon, or FB advancement with bougie, papain or carbonated fluid treatment [5 6 11].

Conclusions

The peculiarity of the case presented resides in the shape and location of the FB, in the patient's age and the absence of any specific adult risk factors.

Management of OFB requires a multidisciplinary approach (gastroenterologist, radiologist, ENT or even a thoracic surgeon); in the case described herewith, rigid endoscopy has been the safer and more successful method for OFB extraction.

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Address for correspondence: Prof. S. Pelucchi, Clinica ORL, Università di Ferrara, Arcispedale "S. Anna", corso Giovecca 203, 44100 Ferrara, Italy. Fax +39 0532 247709. E-mail: pls@unife.it